wherein one end of each tether is covalently linked to the substrate and each growth effector molecule is covalently linked to a distal end of a tether so that the growth effector molecule cannot be internalized by cells attached to the substrate, and the growth effector molecules are attached to the substrate in a concentration effective to enhance the rate of target cell growth without internalization of the molecules, each tether is able to bind more than one growth effector molecule, and the cells do not bind to the tethers.

5. (twice amended) The composition of claim 4 wherein the substrate polymer is selected from the group consisting of synthetic polymers and natural polymers.

6. (twice amended) The composition of claim 5 wherein the substrate polymer is selected from the group consisting of proteins, polysaccharides, [extracellular matrix proteins, ]polyesters, polycapralactone, polyhydroxybutyrate, polyanhydrides, polyphosphazenes, polyorthoesters, polyurethanes, and combinations thereof.

8. (amended) The composition of claim 1 [7] wherein the tether is selected from the group consisting of polyethylene oxide[,] and carboxymethylcellulose[, and starch].

13. (twice amended) A method for growing eukaryotic cells comprising

bringing into contact the cells and a composition comprising

a biocompatible solid substrate,

biocompatible water soluble polymeric tethers, and

growth effector molecules,

wherein one end of each tether is covalently linked to the substrate and each growth effector molecule is covalently linked to a distal end of a tether so that the growth effector molecule cannot be internalized by cells attached to the substrate, and the growth effector molecules are attached to the substrate in a concentration effective to enhance the rate of target cell growth without internalization of the molecules, each tether is able to bind more than one growth effector molecule, and the cells do not bind to the tethers; and

maintaining the contacting cells and composition under conditions and for a time sufficient to cause the cells to grow.

21. (amended) The method of claim 20 wherein the substrate polymer is selected from the group consisting of synthetic polymers and natural polymers.

22. (amended) The method of claim 21 wherein the substrate polymer is selected from the group consisting of polylactic acid, polyglycolic acid, polyanhydrides, polyorthoesters, collagen, glycosaminoglycans, polyamino acids, and combinations thereof.

24. (amended) The method of claim 13 [23] wherein the tether is selected from the group consisting of polyethylene oxide, carboxymethylcellulose, and starch.

31. (twice amended) A cell culture comprising

a biocompatible solid substrate,

biocompatible water soluble polymeric tethers,

growth effector molecules, and

growing cells,

wherein one end of each tether is covalently linked to the substrate and each growth effector molecule is covalently linked to a distal end of a tether so that the growth effector molecule cannot be internalized by cells attached to the substrate, and the growth effector molecules are attached to the substrate in a concentration effective to enhance the rate of target cell growth without internalization of the molecules, and wherein the growing cells are bound to the growth effector molecules and do not bind to the tethers and each tether is able to bind more than one growth effector molecule.

32. (twice amended) A method of testing a compound for an effect on tissue comprising

bringing into contact the compound to be tested and a composition comprising

a biocompatible solid substrate,

biocompatible water soluble polymeric tethers,

growth effector molecules, and

growing cells,

wherein one end of each tether is covalently linked to the substrate and each growth effector molecule is covalently linked to a distal end of a tether so that the growth effector molecule cannot be internalized by cells attached to the substrate, and the growth effector molecules are attached to the substrate in a concentration effective to enhance the rate of target cell growth without

internalization of the molecules, and wherein the growing cells are bound to the growth effector molecules and do not bind to the tethers and each tether is able to bind more than one growth effector molecule;

incubating the compound and the composition under conditions promoting cell growth; and

observing the cells for any effect not observed in cells not brought into contact with the composition.

Please add the following new claim.

33. (new claim) A method for growing eukaryotic cells comprising

bringing into contact the cells and a composition comprising

a biocompatible solid substrate,

biocompatible water soluble polymeric tethers, and

growth effector molecules,

wherein one end of each tether is covalently linked to the substrate and each growth effector molecule is covalently linked to a distal end of a tether so that the growth effector molecule cannot be internalized by cells attached to the substrate, and the growth effector molecules are attached to the substrate in a concentration effective to enhance the rate of target cell growth without internalization of the molecules, each tether is able to bind more than one growth effector molecule, and the cells do not bind to the tethers; and